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Wang et al. (43) **Pub. Date: Apr. 8, 2021**(54) **ELECTRONIC DEVICES WITH
DIRECTIONAL HAPTIC OUTPUT**(52) **U.S. Cl.**
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(2013.01)(71) Applicant: **Apple Inc.**, Cupertino, CA (US)(72) Inventors: **Paul X. Wang**, Cupertino, CA (US);
Michael Y. Cheung, Cupertino, CA
(US)(57) **ABSTRACT**(21) Appl. No.: **17/127,059**(22) Filed: **Dec. 18, 2020****Related U.S. Application Data**(63) Continuation of application No. 15/988,936, filed on
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A system may have one or more electronic devices that include user input sensors such as force sensors, touch sensors, motion sensors, and other input devices. To provide a user with output, devices may have visual output components such as displays, audio output components, and haptic output components. Haptic output components may be used to apply an apparent force in a given direction relative to a device housing surface such as a sidewall surface or other device surface. Control circuitry in a device may direct a haptic output component to produce the apparent force in a direction perpendicular to the housing surface or tangential to the housing surface. The apparent applied force may be provided as feedback while the control circuitry is directing a display in the device or in an external device to provide a user with visual content based on the user input.

